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**PANTOMIME  
MIXTURES  
OF HEAVEN &  
EARTH:  
A THIRD ANTHOLOGY  
OF WRITINGS ABOUT  
PSYCHEDELICS**

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**Edited by  
Ray Soulard, Jr.**

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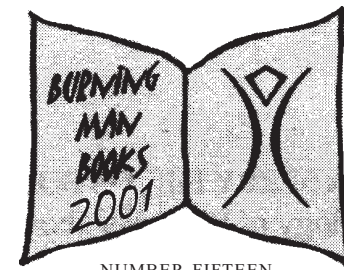
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NUMBER FIFTEEN

*Pantomime Mixtures of Heaven & Earth:  
A Third Anthology of Writings about Psychedelics*

*for outlaws & dancers everywhere*

Burning Man Books is a Special Projects Division imprint of  
Scriptor Press, 32 Newman Rd. #2,  
Malden, Massachusetts 02148  
[cenacle@mindspring.com](mailto:cenacle@mindspring.com)  
[www.geocities.com/scriptorpress](http://www.geocities.com/scriptorpress)

*This volume was composed  
in the Times New Roman and Aurea fonts  
in PageMaker 6.5 on the  
Macintosh G4 computer*

Pantomime mixtures of heaven and earth  
Jumbled events that have less than no worth  
Time in the forest to dig under rocks  
Or float in the ocean asleep in a box

Or sink just below all the churning and froth  
And swim to the light source or fly like a moth  
So toss away stuff you don't need in the end  
But keep what's important and know who's your friend

Phish, "Theme from the Bottom," 1997

# A Short Guide About Psychedelic Drugs for the Explorers of Inner Space

by Donald J. DeGracia  
copyright 1993

## Introduction

There are a variety of tools available to anyone interested in exploring altered states of consciousness. Such tools include meditation, out-of-body experiences, brain and biofeedback instruments, occult-type rituals, visualization exercises, and psychedelic drugs. Each of these tools provides a different doorway into the inner spaces of our subjectivity and consciousness. In this article, I would like to provide a brief overview of psychedelic drugs as one means among many for achieving altered states of consciousness. It is not my intention here to debate whether it is right or not to use psychedelic drugs, whatever one's motive, though I will discuss the variety of opinions that exist in this regard. My purpose here is twofold: to give a broad overview of psychedelic drugs in general; and to show how psychedelics can provide, if used reasonably and responsibly, a valuable and substantial tool for exploring inner spaces.

## History of Psychedelic Substances

The history of mankind's involvement with psychedelics goes back thousands of years. Some modern scholars speculate that the soma of the ancient Hindus was a psychedelic substance used for purposes of religious ritual and ecstasy. The use of opiates in China and the Far East is well documented. The religious uses of psychedelic mushrooms by Native Americans is also a well-documented fact, as well as being a point of controversy in modern legislation.

For the most part, the industrial West did not become involved with psychedelic drugs until after World War II. It was in 1938 that LSD was first produced from rye mold by Albert Hoffman, who was at the time looking for antibiotic substances in fungi. Also around this time, mescaline was identified as the active agent in certain psychedelic plants. Within a few years after being recognized, these substances began to cause severe polarization in opinions about their use and benefit.

On one hand, there were in the 1950s and early 1960s small groups of avant-garde intellectuals who began to associate religious and mystical qualities with the effects of these drugs on human perception. Perhaps best known in this regard was Aldous Huxley's book *The Doors of Perception*, which highlighted Huxley's personal experiences with mescaline. Also in this vein was Alan Watts' *The Joyous Cosmology* which similarly extolled the philosophical and mystical virtues of the psychedelic experience.

On the other hand, during this same period, psychedelic drugs such as LSD and mescaline were viewed by many in the medical and psychiatric fields as substances that seemed to simulate psychosis. Initially, the term "psychedelic" did not even exist. In the 1950s and 1960s these drugs were generally called "psychomimetics," meaning that their effects mimicked symptoms displayed by psychotics and paranoids. Perhaps the crowning tribute to this view of LSD was the book *One Flew Over the Cuckoo's Nest* by Ken Kesey, which reflected Kesey's experiences as a volunteer in LSD medical experiments. Incidentally, Kesey, in the late 1960s went on to be one of the leaders of the West coast psychedelic movement with his band of "Merry Pranksters" (whose adventures are detailed in Tom Wolfe's book *The Electric Kool-*

*Aid Acid Test*).

So from the outset, psychedelic drugs have been viewed by Western thinkers from opposing points of view: most doctors initially equated the drugs' effects with psychosis, while intellectuals equated the drugs' effects with profound religious experiences.

The story of LSD began to peak in the early 1960s with the research of Timothy Leary at Harvard University. Initially, Leary, who was a Harvard psychologist researching the nature of personality, had only an impartial scientific interest in these so-called psychomimetic drugs. He soon found out however that their effects were so great as to cause him to essentially abandon his roots as an elitist East Coast intellectual and become one of the founding fathers of the psychedelic movement in the United States. It was Leary's contention that psychedelic drugs opened up to human perception things long lost from Western tradition, things that were well understood in older cultures and religions. Timothy Leary recognized, like other intellectuals a decade before him, that these drugs have the potential to cause profound religious and mystical experiences, experiences that could easily be distorted and misconstrued by Western reductionist intellectuals as being symptoms of insanity. Leary, like any other person made sane by LSD, came to the conclusion that it was the modern West that was insane, not some poor individual in a psychiatric ward who was experiencing visions and hearing voices.

I do not think there is a need here to attempt to recount in full the story of Timothy Leary. However, we will return to the contention that psychedelic drugs cause religious and mystical experiences. At this point, it is enough to say that Leary helped start something much bigger than himself. The psychedelic movement gained much momentum through the late 1960s, climaxing with events like Woodstock. However, quick as it came, it was gone. LSD was made illegal, Jimi Hendrix and Janis Joplin died, Leary got off his soap-box, and the United States, after failing miserably in Vietnam, drifted into the depressing 1970s.

And here we are, some 30 years later. LSD has not gone away, it is simply not talked about anymore. The best of the actual psychedelic movement turned into the Grateful Dead, who rode a successful music career well into the 1990s. And the basement scientists who in the 1960s made and sold LSD turned into the "designer drug" community on the West Coast, giving us such wonderful poisons as "Ecstasy" (which

causes severe nerve damage if taken enough - so beware!).

With this bit of history under our belts, I'd like to discuss a little about the psychedelic drugs themselves both in terms of what their subjective effects are and also what is known about how they react in the body. After that, I will then go into more detail about their use as a tool for exploring inner space.

## The Effects of Psychedelic Drugs

So doctors call it insanity, and intellectuals call it enlightenment but, really, what is it? What are the effects caused when on psychedelic drugs?

In terms of effects, one of the most important generalizations about these drugs' effects was laid out by Leary when he spoke of "set and setting." What he meant by this is that what an LSD user actually experienced was critically dependent on the user's state of mind (set) and where he was at and what company he was in (setting). It is very difficult to classify the effects of psychedelics because they *are* so dependent upon set and setting. If the user is depressed and in bad company, the experience will be vastly different than if the user is relaxed, happy and in good company.

But, keeping this idea of "set and setting" in the front of our minds, we can still make some generalizations about the subjective effects of the LSD experience. Some of the most commonly reported effects are:

1. Visual hallucinations.
2. Audio hallucinations.
3. Sensory mixing (hearing sights or seeing sounds).
4. Weakening of ego boundaries (a weakening or loss of sense of self).
5. Enhanced ability to think abstractly.
6. The uncontrollable urge to laugh.
7. Enhanced ability to sense the emotions of others.
8. Inability to maintain focus or concentration for long periods.
9. Feelings of extreme joy.

10. Feelings of extreme depression and terror.

11. A direct apprehension of God.

Now this list is by no means complete. It only states some of the more commonly reported effects. It is also important to state that not all of these are experienced by an LSD user. As a matter of fact it is possible that none of these effects will be experienced. It is important to be aware that: THE EFFECTS OF PSYCHEDELIC DRUGS ARE EXTREMELY UNPREDICTABLE. The rule of "set and setting" is the best guide for anticipating what the effects of a psychedelic experience may be. As a matter of fact, I have a close friend who is quite experienced at the use of psychedelics, and his rule of thumb is the following: "if you have a garden in your mind, then you'll be in it. If you have a garbage can in your mind, then you'll be in it." This is very useful advice.

## Explanations of Psychedelic Effects

At this point I would like to begin to discuss what it is that these drugs are doing in the body. There is no question that psychedelics cause profound effects. The really key question is: where do these effects come from?

To answer this question I would like to lay out two very different theories of what it is the psychedelics are doing to the human being. We will see that these theories are complimentary in that they both shed light on mode of the action of psychedelic drugs. However, these two theories I am about to discuss are products of vastly different world-views that most people consider to be contradictory. In this article, I take the attitude that we can learn from both. The two views of how psychedelics affect humans that I will now discuss are the scientific view and the occult view. Both science and occultism offer reasonable and useful views about the nature of the psychedelic experience. However, what I intend to illustrate here is that the occult view is simply better. Let us begin with the scientific view.



## Scientific Explanations of Psychedelic Effects

Science tells us that our consciousness is somehow the product of our brain; that our psychology is the software, and the brain is the hardware. At first glance, the LSD experience seems to completely support this view for we have eaten a chemical that severely alters the hardware, and thus, expectedly, alters the software (i.e. our thoughts and perceptions). For the moment, let us just accept this contention and work with it.

Modern scientific investigations into the structure of the brain shows that it is made of lots of different layers of tissues such as the cortex, cerebellum and others. These tissues in turn are, in total, made of some one trillion cells. These cells are called neurons. Neurons look a lot like tree branches, branching off in myriad directions touching many, many other neurons. And the neurons align themselves like fibers, making thick tracts of cable throughout the brain. Neurons conduct electricity along themselves; this electricity is created by salts like sodium and potassium, chloride and calcium. These salts act in the cells, much like the salts in a battery work to make electricity.

Neurons do not touch each other directly; there is a small space between adjacent neurons called a synapse. Neurons conduct electricity from one to the next by electrical impulse traveling the length of the first or sending neuron until it gets to the synapse. At this point, the electricity at the synapse causes the first neuron to release chemicals, called neurotransmitters, into the synapse. These neurotransmitters float across the synapse where they encounter the second or receiving neuron. Depending on the nature of the second neuron, once the neurotransmitters contact it, it will either continue the impulse (and this then would be an excitatory neuron), or it will not conduct the impulse (this is an inhibitory neuron). It is important to appreciate that there are two types of neurons in the brain, excitatory and inhibitory. This is important for understanding how science explains the mode of action of psychedelic drugs.

As it turns out, the chemical structure of the psychedelic looks very similar to the chemical structure of the neurotransmitters in the brain. Scientists therefore conclude (and quite reasonably) that what happens when you take a psychedelic drug is that the drug gets into the brain and

interferes with the normal operation of the neurotransmitters. The psychedelic drug fools the neurons into thinking it is a neurotransmitter and it then disrupts the normal flow of business in the neurons. Now the specific details of how this happens do not exist. Yet, because the psychedelics expand the activity in one's consciousness, scientists believe that whatever psychedelics are doing in the brain, ultimately they are disrupting inhibitory synapses. The idea here is that inhibitory synapses serve a filtering function in the brain and that unwanted or unnecessary stimuli are inhibited. If psychedelics disrupt this filtering function, then one would expect an increase in the "noise" level of the brain leading to such activities as hallucinations or even delusions. Thus, the effects of psychedelics are generally seen by scientists to be "noise" (similar to static on a radio, for example).

There is no question a certain degree of merit to this hypothesis. However, one could ask as well: are there perhaps latent functions in the brain that are turned on by psychedelics? This point of view has not been well-addressed by scientific research: how can you look at something if you don't know it exists? If there are functions turned on by psychedelic drugs in the brain that do not normally operate in our usual states of consciousness, then scientists have nothing to compare these states to, and thus are affected by a blind spot. Still, though this question of turning on latent functions is not easily addressed in terms of scientific thinking, we shall see below that occult views provide us a basis to reasonably address this question.

In spite of any hypothesis scientists may provide as to the operation of psychedelics in the nervous system, we must put this discussion in its proper perspective. Whatever scientists may profess to know about the activity of psychedelic drugs is colored strongly by the fact that the current scientific understanding of how the brain and nerve cells work is highly incomplete.

So on one hand, scientists like to believe that the brain creates consciousness, but on the other hand, scientist have only a partial and incomplete understanding of how the brain works. This seems like putting the cart before the horse to me. It is possible that science will come to understand in very full detail how the operation of the brain leads to memory formation and other psychological phenomena. The



bottom line is that science's contention that the brain creates consciousness is more belief and dogma than it is a provable fact.

It's important to appreciate this situation, because what it does is leave the doorway open for alternative explanations. And in this quest for alternative explanations, we do not have to take an attitude that science is wrong and the alternatives are right, or vice versa. We can take a more balanced and reasonable attitude and realize that different explanations will give us a broader scope on the issue and therefore, in the end, make our understanding fuller than if we defensively or dogmatically cling to only one view of things.

So having said this, let us turn to an alternative explanation of LSD's effects (and any other psychedelic for that matter).

## Occult Explanations of Psychedelic Effects

Occultists have a much different world-view from scientists, but as a world-view it is no less complex. Occultism teaches that our consciousness is independent from our body. According to occultists, our body (and therefore our brain as well) is but a temporary vehicle that houses our consciousness in the span of our life in the physical world. Occultism also teaches that there are worlds other than the physical and these worlds are called "planes." Only four of these planes are significant to humans. These are the physical, astral, mental and buddhic planes. According to occultists we also have vehicles or bodies for each of these planes. Thus each of us has an astral body and mental body and a buddhic body.

It is by this theory that occultism explains the plain facts of our lives. Occultism teaches that our emotions are our astral body, that our mind is our mental body, and that our soul or conscience is our buddhic body. Thus, right from the start, occultism does not bother with the idea that our physical body creates our mind, emotions or soul (and this idea of "soul," incidentally, is something science likes to deny). Instead, occultism claims that all of these vehicles overlap and interact and create our life and experience as we know and understand it.

Occult theories detail very carefully the manner in which all the

vehicles interact. The interaction of the vehicles is explained by the theory of the chakras. The chakras are seven (or a couple more depending on the scope of the occult theory) vortex-like depressions in the astral, mental and buddhic bodies that serve as energy channels between the bodies. The chakras are energy processing centers that hold the bodies together and unify mind, body, emotion and soul into the one framework of our direct experience. As it turns out, the location of the chakras in our other bodies, line up in a line with the spine of our physical body and they are located wherever there is a nerve plexus in our physical body.

Furthermore, occultism teaches that there is an intimate feedback and interplay between all of the bodies, and this feedback is effected through the chakras. Our physical body also has chakras, but these are invisible to our physical senses of sight, sound, taste, touch and hearing. Our physical chakras are made of a type of radiation that is invisible to our sense (this radiation is called "etheric matter" by occultists), but they exist nonetheless, and serve as the bridge between our nervous system and our astral, mental and buddhic bodies.

Chakra theory is very complex. Each chakra serves a variety of specific functions. These I will only briefly outline here to the extent that it is relevant to our discussion of psychedelic drugs. Here is a list of the chakras by their common name (the Hindu names can be found in any worthwhile yoga book). These will be listed from the bottom of the spine up to the top of the spine, along with the corresponding body locations:

1. Root chakra - between the legs
2. Navel chakra - at the waste
3. Spleen chakra - over the navel
4. Heart chakra - over the heart
5. Throat chakra - over the throat
6. Third eye chakra - over the forehead
7. Crown chakra - top of head

So as not to keep the reader in suspense, the reason I am going into some detail about chakra theory is that we shall see that it explains much more clearly than science does what happens when under the influence

of psychedelic drugs. To go into this we need some understanding of the functions of the chakras. These are listed briefly as:

1. Root - sex energy, libido
2. Navel - excretion (kidneys, liver), sensation in general
3. Spleen - digestion, energy input, ability to dream
4. Heart - circulation, empathy
5. Throat - communication, speech, hearing, clairaudience
6. Third-eye - sight, cognition, clairvoyance
7. Crown - brain, thought, spirituality

Notable here is that each chakra has not only physical functions or organs associated with it, but also subjective and psychological functions. It is by means of this theory that occultism explains the relationship between mind and body and soul. All of these factors are interconnected through the operation of the chakras. Even though it may seem that we are getting unnecessarily complex here, we are actually building a very powerful theoretical framework of how a human is built and operates. Already at this point we have related biological and psychological functions in one coherent theory. Science, with its reductionist mentality can offer us no equivalent counterpart. Chakra theory, and occultism in general, does indeed offer this understanding. Furthermore, occultism does not contradict or clash with science in any way; instead, it offers us an expanded viewpoint that integrates the facts known to modern science into a larger view of our total experience as human beings

So with this minimal picture of occult theory in mind, let us return to the issue of psychedelic drugs. Using occult theory, what we can say is that psychedelic drugs severely affect the behavior of the chakras. All of the subjective effects listed earlier in this article can be accounted for as effects of hyperactivity in definite chakras:

1. Visual hallucinations are in actuality the stimulation of the third eye chakra, leading to some degree of clairvoyance, which is the perception of the adjacent planes.
2. Audio hallucinations are the stimulating of the throat chakra to hyperactivity. In this case, one begins to hear on, for example, the astral plane.

3. The mixing of sensory modalities is an effect of the crown chakra, which is the site of integration, not only of sensory perception, but astral perception (emotions), and mental perception (thinking). Thus, at the point of integration (crown chakra) all separate modalities are blended into a unified consciousness. This effect is enhanced under psychedelics. And the psychedelic effect is even more pronounced because of the fact that we rarely recognize this integration to begin with. It is there all along but we don't realize it, and when the drug stimulates the crown chakra and we are forced to look at this integration of the modalities of our consciousness, it seems surprising to us.

4. The weakening of ego boundaries is again an effect of increasing the activity of the crown chakra. In this case, it is not so much that the ego is loosened but that the ego is seen in its proper perspective in the totality of our organization as a human being. Again, this is an effect of the integration function of the crown chakra. The ego (which effectively is our personal identity) is but one facet of our being. In our daily lives, however, we tend to overemphasize our ego at the expense of other facets of our being. Again, the psychedelic stimulation of the crown chakra only serves to put things in a more realistic perspective.

5. Enhanced ability to think abstractly. What is happening here is that the psychedelic triggers off such an enormous increase in libido energy (which will be discussed below) that our mind is capable of perceiving a much vaster range of the mental plane. This effectively translates into broader, more sweeping and more abstract thoughts.

6. The uncontrollable urge to laugh is a classic phenomenon indicating enhanced chakra activity. Laughter is a release of tension. Increasing the activity of chakras is also a release of tension. The increased chakra motion effectively burns up the extra energy. An experienced LSD user is unlikely to have this laughter effect, only a novice who is not used to the sensations of enhanced chakras would express these sensations by uncontrollable laughter. This is very similar to how people laugh when

they are nervous or cry when they are very happy. However, on the psychedelic, the effect is greatly increased.

7. The enhanced empathic ability is mainly a function of the hyperstimulation of the heart chakra. Our whole ability to be sensitive to the emotions displayed by others resides in the heart chakra. The psychedelic stimulates the heart chakra, so it is no surprise that a typical psychedelic user is more sensitive to the feelings and attitudes of others.

8. Inability to maintain focus or concentration for long periods. Here we run into a situation that is probably more a function of the brain than of the chakra system. It should be pointed out that experienced psychedelic users will report that this effect only lasts for a small percentage of the time that the drug effects are occurring. Probably what we are seeing here is the maximum effect of the actual chemical in the physical body in which there is a maximum disruption of the normal function of the neurons in the brain. Again, this effect is short lived (usually about 30-60 minutes). And often it seems that this effect is a prelude to the effect of thinking abstractly. It appears that we are dealing with distinct phases of the drug experience here and with effect number 5, again, with number 8 here preceding number 5.

9. Feelings of extreme joy. This effect is literally the opposite of effect 10: feelings of extreme terror and/or depression. What we have here is an amplification of one's normal state of mind by the enhanced libido of the drug. Whatever the user is feeling becomes greatly magnified, so reports of extreme emotional states are common. Also, since emotion is generally a function of the concerted (simultaneous) operation of the four lower chakras, we find here evidence that the psychedelic is affecting not only the higher chakras (throat, third-eye and crown) but the lower ones as well.

10. Finally, the direct apprehension of God. It is in studying this psychedelic effect that we can begin to tie together many elements of this article. We have seen that intellectuals such as Huxley, Watts, and Leary identified the LSD experience with religious experience. Furthermore, all yoga texts worth reading explain that the function of yoga is ultimately to transfer all of the

libido energy to the crown chakra at which point the yogi achieves nirvana, or mystical insight, which, practically speaking, is *the* total, integrative psychological event. One directly perceives the unity of the cosmos, and one's place in this unity. For all practical purposes, this is indeed seeing God. That Western intellectuals have perceived this in a religious context, and Western physicians have perceived this in the context of psychosis, really tells us something about Western intellectuals and Western doctors.

At this point, I would like to attempt to generalize this picture of the action of psychedelic drugs on the chakras system. One important facet of occult teaching I have not explicitly stated yet, though I have been using it, is the idea of "kundalini." Yogis and occultists teach that housed in the root chakra is a fundamental energy called kundalini. This energy is depicted as a coiled snake and it is the goal of the yogi and occultist to, slowly and in a controlled manner, release this energy. The purpose for releasing this energy is to bring it progressively through the chakras, which in turn confers the particular psychic abilities associated with that chakra. This process is known as "awakening" or "vivifying" a chakra. This energy is brought up the spine (or the etheric counterpart thereof) and its final destination is the crown chakra, which, upon successfully reaching, confers enlightenment, which is the true goal of both yoga and occultism, as well as mysticism. Bringing the kundalini to the crown chakra is exactly the method by which enlightenment is conferred.

Above I used the word "libido," a word derived from Freud that loosely translates as "sex energy." Libido is kundalini. However, the idea of kundalini is much broader and clearer than Freud's concept of libido, so I will now use the word kundalini from here on out.

So with this background, let us attempt to give a general explanation, in occult terms, of the effect of psychedelic drugs on a human being.

What seems to be happening during the psychedelic experience is that the kundalini is spontaneously activated by the drug. How this occurs is unknown. What probably happens is that the psychedelic somehow affects the gland system of the body (which is called the endocrine system and includes the adrenal glands, thyroid, parathyroid, pituitary and pineal glands, among others), not simply the brain. I make

this statement about the endocrine system because occultists often point out the crucial role played by the pineal and pituitary glands in meditative practices. In a fashion that is very ill-defined both scientifically and occultly, these glands play an intimate role in relation to the kundalini. Unfortunately, not much more than this can be said.

Somehow, the drug confers changes in the endocrine system of the body that result in the stimulation of the kundalini. The kundalini becomes active in an uncontrolled fashion, which is literally the opposite of yoga in which kundalini is slowly and painstakingly controlled over years of meditative practices. The onset of alterations in the LSD user's perception corresponds with the onset of the kundalini release. As this energy is released in a spontaneous and uncontrolled fashion, any number of psychological and subjective events are possible that would be completely dependent on the circumstances under which the drug was taken. This then is the explanation of Timothy Leary's notion of "set and setting."

## Psychedelic Drugs and Inner Exploration

At this point we have completed our overview of psychedelic substances. We've briefly mentioned the history, discussed the subjective effects of these drugs, and gone into some detail of scientific and occult explanations of why these drugs do what they do to human beings. In this last section, I would like to try to tie all of this together in terms of how these drugs provide a tool for the individual interested in exploring his or her own subjectivity, the inner spaces of one's being.

Going off on all the occult chakra theory as I did above has one overridingly important lesson to it, and that is the realization that psychedelics do in one hour what yogis spend their lives trying to accomplish. The release of the kundalini energy is no small or trivial matter. My friend that I mentioned earlier likes to compare LSD and related substances to nuclear bombs. Both are immediate, almost incomprehensively powerful, and can kill a lot more readily than they can heal. LSD is something to be respected, if not revered, because it is

indeed a doorway to many divine things. I would not discourage one from taking the drug. However, I do not advocate the careless use of the drug either. If one is interested in using it as a tool for experiencing realities that current dogma tells us do not exist, well, I recommend that the explorer exercise respect for this particular tool. And then, as an explorer, you can see that current dogma is simply wrong.

Another purpose for going off on both scientific and occult theory is to show that there is way more going on here than meets the eye. In this regard, I have a favorite quote by Leadbeater that says it all: "We must beware of falling into the fatally common error of supposing that what we see is all there is to see." LSD, and psychedelic drugs in general, can be used as a tool to give concrete substance to Leadbeater's statement. The watchful and attentive psychedelic user will learn many things about the hidden worlds that we cannot perceive with our physical senses, ranging from things as unbelievable as seeing the cells inside your brain, to seeing atoms and molecules, to readily perceiving abstractions so glorious as to defy your very being, all the way to—dare I say it—seeing God first hand, and allowing God to talk through your mouth. On this note, I'd like to end this article with a quote by Aleister Crowley, (taken from *The Book Of Wisdom Or Folly*) that absolutely captures the spirit of this article:

"Concerning the Use of Chymical Agents, and be mindful that thou abuse them not, learn that the Sacrament itself relateth to Spirit, and the Four Elements balanced thereunder, in its Perfection."

# Confession of an Amerikan LSD Eater

by Dale R. Gowin  
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*This essay was written in 1991 while the author was incarcerated at Elmira Correctional Facility, a maximum-security prison in New York State.*

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So here I am, locked in a cage in an ancient, crumbling dungeon, doomed to spend a decade of my life marching through these murky corridors under the watchful gaze of club-wielding cops with bloated guts and beady, piggish pink eyes—cops that will open my mail, control the clothes I wear and the food I eat, examine my urine for outlaw molecules, and search my rectal cavity to make sure I’m not hiding any forbidden objects. For companions in these corridors I have a motley crew of social misfits, some like Arlo Guthrie used to say “mother-stabbers and father-rapers,” some thieves, bank robbers, muggers and con men, some revolutionary warriors and enemies of the State, and an increasing number like myself who are condemned to this fate because of a fondness for forbidden visionary vegetables.

Yes, I am one of the most despised and despicable of media monsters, that blight of corruption against morality and decency and

law’n’order—one who chooses to partake of consciousness-altering flowering herbs and alchemical essences—a drug user! Ever since my discovery in the late 1960s of the miraculous and magical mind-manifesting powers of psychedelics, I have continued to occasionally use and enjoy these heretical vegetable products. Further, I have spoken out honestly, in print and from the public stage, about my belief that these products should be legal so that those of us who choose to use them can do so without fear. It has been my opinion that the lungs, stomach, bloodstreams and brains of individual citizens are beyond the legitimate limits of government authority—and that in a free society, people should be free to grow, prepare, use and exchange whatever vegetable products they like, without interference from the State.

## Busted

Over the last couple of decades, I have continued to publicly oppose prohibition laws and other forms of social and political authoritarianism. This open activism caused me to come under the surveillance of the “authorities,” and it came to pass that I was busted in a sting operation in the city of Syracuse, New York, late in the evening of October 17, 1990.

A “friend” who I had known and trusted for many years had decided to earn some extra income for himself (or, perhaps, exculpate himself from a legal embarrassment of his own) as a paid informant to the Thought Police. He arranged to introduce me to an undercover police agent, who expressed an interest in LSD and asked me if I could find him some.

This wolf in sheep’s clothing (a skillful agent who specializes in entrapping drug heretics, a former New York State Police officer by the name of Christopher A. Wiegand) wove a web of lies and deceit around me to establish his credibility. He wore his hair long and shaggy; he dressed in old, ragged jeans and motorcycle boots; he affected countercultural mannerisms of speech and demeanor; he smoked pot with me at my house on a number of occasions. I located some LSD for him as he requested, and he came to my house to pick it up.

At first he bought a few hits, and then he returned for increasingly



larger quantities. On the final occasion, he had worked his way up to a bundle of ten sheets (each sheet containing 100 doses of LSD in little squares of blotter paper). On this visit, he brought a team of heavily armed police thugs with him. They were waiting at my front door when I opened it to let him out.

Suddenly I found myself looking down the barrels of six 45-caliber pistols. I was thrown to the ground, pummeled, kicked, handcuffed, and hauled back into my home for a few hours of interrogation. While two of the thugs “questioned” me (trying to convince me to turn informant so that I could “get off easy”), the rest of the team proceeded to “search” my apartment. They had a great time and did a very thorough job. They ripped up and smashed everything in sight—pulling books down from the shelves of my private library and heaping them on the floor; demolishing the shelves themselves; tearing paintings from the walls and trampling them; hurling computers and stereo equipment across the room. Records and tapes and files of documents were strewn about like rubble. They confiscated a selection of books and documents to be used as evidence against me. In the course of the search, they found some more sheets of LSD, a small amount of marijuana, a single dried peyote button, and a set of scales.

I found myself facing six felony charges and a handful of misdemeanors (including multiple counts of sales, possession with intent to sell, and possession of a controlled substance). My court-appointed attorney told me that, since I had a previous drug-related indiscretion on my record, I faced a probable 25-to-life sentence, unless I was willing to switch sides and help prosecute my comrades. I spoke of challenging the charges on constitutional grounds, but I was told that this would virtually guarantee a maximum sentence. Other lawyers I sought advice from concurred, citing the prevailing political climate. (Shortly after I was busted, an undercover cop was killed during a failed sting operation—unfortunately not the cop that nailed me—and the media was filled with anti-drug hysteria that approached a lynch-mob mentality. The judge assigned to my case was evidently persuaded that my offenses exceeded in seriousness such paltry crimes as mere murder, rape or grand larceny.)

After I had cooled my heels in the county jail for three months (in lieu of \$50,000 bail), the D.A. evidently realized that I wasn’t going to “cooperate” with the Unholy Inquisition, and I was offered a “plea

bargain” in which the original charges against me were dropped and a charge of “conspiracy” was substituted—a handy, all-purpose charge which can have any meaning they choose to give it. At first, this deal came with a 12-to-life sentence (at least 12 years in prison followed by a lifetime on parole), but eventually, as I continued to hold out and demand a jury trial, they dropped it down to 6-to-12, and I was told that this was the final offer—I could take it or go with a jury trial and surely get the maximum 25-to-life sentence. So, swallowing my misgivings, I took the deal.

My experience was not an uncommon one. Recent statistics indicate that there are more than 1.5 million Americans currently incarcerated in jails and prisons [*over 2 million as of Feb. 2000* ], and that something close to 50% of us are locked up for prohibition violations.

## Behind the Scenes in the “War on Drugs”

So, here I am: a prisoner-of-war in the “war on drugs.”

A look beneath the veneer of propaganda shows that this “drug war” is a deceptive and insidious attack on human freedom, waged by an ultra-rich class of corporate profiteers who have successfully subverted the American political system and are attempting to establish a stranglehold on the entire world—a “new world order” that will ensure their global economic and political dominance. The drug prohibition laws are one element in their conspiracy, one cog in their machine of global domination.

The “drug war” is the epitome of hypocrisy. The politicians who wage this war against users of non-approved drugs are nearly all addicted to alcohol, tobacco and caffeine, which are among the deadliest drugs ever used by humans.

Tobacco alone causes over 400,000 deaths of Americans annually.

Alcohol is the direct cause of over 125,000 U.S. deaths each year, and it is responsible for many times that number of deaths because of its correlation with traffic accidents, homicides and domestic violence.

Even caffeine, which is loaded into children’s candies and soft drinks, causes over a thousand deaths in the USA each year.

In comparison, all illegal drugs, including the most harmful, cause less than 5,000 U.S. deaths annually. And the #1 target of the “drug war,” marijuana, *has never caused a single death in all of history anywhere in the world*, despite the fact that it has been more widely used, and more thoroughly studied, than any other mind-altering vegetable product.

This fact was admitted by Francis L. Young, a D.E.A. administrative law judge, in an official ruling in 1988. He confirmed that there are no known deaths attributable to marijuana use, and stated that marijuana is “one of the safest therapeutically active substances known to man,” and added, “In strict medical terms, marijuana is far safer than many foods we commonly consume.”

Tobacco, besides being more deadly to human health than any other legal or illegal recreational drug, is also one of the most addictive. It is often easier to kick a heroin habit than to stop smoking tobacco. Yet, the U.S. mass media is littered with seductive ads urging consumers to get hooked. These ads are prominently displayed on giant billboards in every major American city, on highways and at concerts and sporting events. They use subliminal techniques to manipulate the minds of the people. And the U.S. government subsidizes tobacco growers at taxpayers’ expense.

## Secret Government Drug Trafficking

But there is another level of “drug war” hypocrisy that is even more insidious.

While the U.S. government has been prosecuting users of illegal drugs, it has been engaging in secret trafficking in heroin and cocaine with the aid of the CIA, to finance “covert” military operations.

Many veterans returning from Vietnam in the early 1970s described how they had witnessed, or had been forced to participate in, the smuggling of tons of heroin into the U.S. from the Southeast Asian “golden triangle” during Nixon’s “secret” incursions into Laos and Cambodia. The heroin was loaded into sealed coffins supposedly containing the dismembered corpses of American soldiers.

In the 1980s, the same type of government-sponsored drug traffick-

ing occurred with cocaine (and there are indications it continues today). The CIA arranged the importation of thousands of tons of cocaine into the U.S. from Central and South America and the Middle East, to provide covert funding for the Nicaraguan “contra” war. Details of these dealings leaked out during the Iran-Contra congressional hearings, and the story was widely reported by the newspapers of the world—except in the U.S., where it was totally suppressed. The government of Costa Rica identified Oliver North, John Poindexter, and Richard Secord as conspirators in a cocaine trafficking plot, along with CIA operative John Hull, whose Costa Rican ranch was used as a transshipment point for drugs and arms.

This covert government involvement in drug trafficking was designed to serve a dual political purpose. On the international level, it provides financial support for covert military operations in the Third World, in furtherance of the strategy of “low intensity warfare” in support of U.S.-based multinational corporations.

Domestically, the proliferation of debilitating drugs is used to destabilize the oppressed populations of the inner cities, to counteract potentially revolutionary tendencies, and to provide a pretext for the militarization of domestic law enforcement and the erosion of traditionally-protected civil liberties, bringing us a step closer to the monolithic police state that the corporate oligarchs have planned for America and the “new world order.”

Heroin flooded the streets of U.S. cities during the late 1960s and early 1970s. It rapidly plummeted in price, giving Nixon the diversion he needed to veil his major crackdown on dissidents and revolutionaries (including the FBI’s “ColIntelPro” purges and the police assassination attacks on the Black Panther Party, and the frame-up of Timothy Leary on pot charges as he was putting together his campaign for governor of California). Part of this wave of repression was the draconian anti-drug law that was sponsored in New York State by governor Nelson Rockefeller, the Butcher of Attica.

Under the Carter administration, there was a brief, partial thaw in the anti-drug rhetoric, during which some marijuana “decriminalization” bills were being passed by state legislatures, and some research was conducted on marijuana’s many medicinal properties. But with Reagan’s “October Surprise” takeover of the federal government, this liberaliza-



tion abruptly ended. Positive findings about marijuana's value in medicine were suppressed. Cocaine flooded U.S. cities in unprecedented abundance, dropping rapidly in price. George Bush, former CIA director under president Ford and Reagan's top anti-drug enforcer, toured the country making speeches about the new menace of "crack" just as it was being introduced into America's underground markets, as if he were a soap salesman drumming up interest in a new brand of detergent.

## The Anti-Cannibis Conspiracy

Under Nixon/Ford and Reagan/Bush, the major prohibition enforcement target was the least harmful of all recreational drugs: marijuana. Why this irrational national vendetta against this harmless, healing herb?

The carefully suppressed truth is that the marijuana plant—*Cannabis sativa* or "Indian hemp"—was once a major industrial resource that threatened the monopoly profits of the petrochemical industry and other interrelated corporate interests. Paper, textiles, plastics, paints and varnishes, medicines and thousands of other products were once made from hemp. It was also a source of clean burning fuels that are viable alternatives to gasoline and coal.

Technical advances in hemp processing in the 1930s caused a resurgence in the hemp industry that could have triggered a revolutionary shift in the American economy, putting the giant petrochemical-based monopoly corporations out of business and transferring their profits to a "grass-roots" network of independent, agriculturally-based enterprises.

Hemp products were in the public domain and could not be controlled by exclusive patents; thus they eluded the control of monopoly-based megabusiness conglomerates.

The incestuously interlocked petroleum, chemical, paper, banking and pharmaceutical corporations (DuPont, Hearst, Mellon, GM, Rockefeller, etc.) joined forces in a blatant conspiracy to destroy the hemp industry, which they couldn't compete with in a free market. Through the control of the nation's media, they fabricated the "reefer madness" campaign of anti-drug hysteria, and under its influence the

fraudulent "Marihuana Tax Act" was pushed through Congress with a minimum of debate.

Before hemp prohibition began in 1938, marijuana and hashish were widely used and commonly accepted by the U.S. population with no hint of negative effects. Cannabis was listed in the U.S. Pharmacopoeia with over 100 different medical uses, and it was as popular an over-the-counter medicinal ingredient as aspirin and Tylenol are today. "Turkish smoking parlors" were open for business in all major U.S. cities, and hashish smoking concessions were a popular attraction at the World's Fairs. Hashish candy was sold openly in corner drug stores and through the Sears catalog. Yet, a few years after hemp prohibition began, all traces of cannabis and the hemp industry had vanished from the American media, school curricula, and history books, in one of the most thorough Orwellian cover-ups in modern history.

## Psychedelics: Mind-Manifesting Magical Medicines

There is another reason that the State tries fanatically and fruitlessly to keep the people from using marijuana: *it gets you high*.

Like the other psychedelics, marijuana can expand human consciousness. This is threatening to the State, which bases its power on the ignorance and superstition of the masses.

Drugs like alcohol and tobacco, or heroin and cocaine, are useful to the State: they induce an intoxicated stupor, keep users dumb and gullible, and promote attitudes of competition and aggressiveness. They set up chain reactions of addictive cravings, ensuring a steady stream of customers and profits.

Psychedelics, on the other hand, tend to awaken the mind from the hypnotic somnambulism of American consumer culture. Psychedelics are "anti-brainwashing agents," stimulating users to question the assumptions of the establishment and to break through the indoctrination and conditioning that the State uses to turn us into obedient robot consumer/worker/soldier/housewife/bureaucrats. Psychedelics can widen the horizons of the mind, awakening the creative imagination.

Besides cannabis, the major psychedelics are:

- \* LSD (made from ergot, a purple fungus that grows on rye, or from the seeds of certain varieties of morning glory and Hawaiian Rosewood flowers);
- \* mescaline (from peyote and other cactuses native to Mexico and the American southwest); and
- \* psilocybin (from “magic mushrooms”).

Each of these has its own unique subtleties of effect, but they all share the same basic characteristics. They expand the scope and complexity of perception, thought, comprehension, and imagination. They amplify the brain’s access to input through all sensory channels. Previously “subconscious” and “unconscious” mental contents are brought into the spotlight of conscious awareness.

These effects were noted by early researchers. Aleister Crowley, a British poet and mystical philosopher who experimented with cannabis and mescaline, described their effects as a “loosening of the girders of the soul” in his 1909 essay, *The Psychology of Hashish*. Aldous Huxley described the effects of mescaline as an opening of “the doors of perception” and wrote that it provided access to “the antipodes of the mind.”

Psychedelics are not “hallucinogens”: this derogatory term is used in State-sponsored anti-drug propaganda, just as all illegal drugs are often included under the blanket term “narcotics”—including cocaine, which is a powerful stimulant, the opposite of a narcotic. The alterations of perception caused by psychedelics are not hallucinations in the strict sense of the term. Rather, they are amplifications and magnifications of perceptions and mental functions, analogous to the altered perceptions caused by looking through the lenses of a telescope or a microscope. There are some drugs which are true “hallucinogens”—i.e., which induce a confusion of the senses in which false perceptions are mistaken for real—including the belladonna / jimson weed / henbane family of herbs, sources of the drugs atropine and scopolamine. These drugs are in a distinct class from the psychedelics, as unbiased scientific studies of the subject make clear.

The term “psychedelic” was coined by Dr. Humphrey Osmond in the 1950s. It is derived from the Greek words *psyche*, soul or mind, and *delos*, to manifest or make clear; thus, the meaning of the term is “mind

manifesting” or “soul-clarifying.” Since the 1960s, the word has entered into popular usage to describe such varied subjects as clothing styles and techniques of musical or artistic expression, but in its original sense it remains the most accurate scientific term for the unique class of consciousness-expanding drugs.

Simply stated, psychedelics affect consciousness by triggering increased amounts of neurotransmitters to flood the synapses of the brain, thus allowing the brain to process a larger percentage of the information streaming in through the nervous system. The effect is like switching on a bright light in a dimly lit room, or like waking up from a lifelong semi-sleep, to a higher degree of wakefulness than you’ve ever known.

LSD and the other major psychedelics were made illegal in 1966, at a time when they were having a major effect, both in the world of scientific, medical and philosophical research, and in the world of popular culture, where they were triggering a worldwide renaissance in music, art, literature and fashion that was affecting human society in innumerable ways.

Research with LSD showed that it had tremendous value as an aid to psychotherapy and in the treatment of alcoholism. LSD therapy was found to provide more permanent recovery from alcohol addiction than any other method, before or since. A landmark study in the early 1960s showed that a few sessions with psilocybin could cause a major drop in recidivism among prison inmates convicted for violent crimes. LSD was found to ease the fear of death in terminal cancer patients. Yet, despite these and many other positive discoveries, all research with psychedelics was curtailed when prohibition was enacted.

Passage of laws against psychedelics was supported by a proliferation of distorted and fabricated propaganda in the mass media, in a replay of the successful anti-marijuana campaign of the 1930s. Popular myths remain today among the majority of the public that is unaware of the scientific literature on the subject; that LSD causes chromosome damage, for instance—news stories correcting this fallacy were buried on the back pages of the daily papers and had little effect on the impressions made by the banner headlines that had originally proclaimed the scare stories.

## Freedom of Religion

Millions of us who sampled the psychedelics in the 1960s experienced profound, life-changing spiritual and philosophical revelations that were of incomparable personal value. These experiences paralleled discoveries made with the aid of sacramental vegetable products by indigenous peoples from all parts of the world since ancient times—discoveries that are enshrined in the sacred scriptures and spiritual traditions of many of the world's religions.

The “legal” persecution of those of us who freely choose to follow this ancient and honorable spiritual path—the yoga of light-containing herbs—is ethically indistinguishable from the persecution of witches and heretics, or the persecution of early Christians by the Roman state.

Whether or not the use of sacramental vegetable products meets with the approval of the civil authorities—or anyone else—it is a personal matter that clearly deserves the protection of the First Amendment to the U.S. Constitution, which promises that the “free exercise of religion” will not be abridged.

In my own experience, the vistas opened up by LSD and the other psychedelics were among the most interesting and important events of my life. Under the spell of these elixirs of light, I was filled with a sudden, overwhelming reawakening of the quality of consciousness that I remembered experiencing as a young child—yet with the addition of a fully functioning rational intellect. The fundamental questions of philosophy suddenly emerged from the dusty academic realm and assumed a living immediacy: Who am I? What is this reality, this thing we call “life”? How did this universe come to be? And what does this mean, to “be”?

And following on the heels of these questions came answers, flooding forth from within me and from everywhere I looked in the world around me. A transcendental understanding flowered in ecstasy; the scales fell from my eyes and the mysteries of Nature were revealed like an unsealed book in the clear light of the awakened Gnosis. The insights of Eastern philosophy and Western mysticism, of William Blake and Vincent Van Gogh, were unlocked with a spontaneous revelation of their relevance to the collective human condition. I felt renewed, reborn in the purging brilliance of the revelation.

The power that gave birth to this revelation lies latent within us all, locked within the cells of our bodies, in the molecules of the matter that makes up the matrix of reality, awaiting the chemical keys that will release it into conscious awareness.

This is not to say that the use of psychedelics is the *only* way to release this transcendental understanding. But it certainly is *one* way—a way that works.

## Repeal Prohibition Now

Prohibition laws are an encroachment by government into the most sacred areas of individual liberty and personal privacy.

Prohibition enforcement relies on the basest malignancies of human nature, rewarding the treachery and deceit of paid informants and the lies and deceptions of undercover agents, encouraging children to spy on their parents and citizens on their neighbors, turning public life into a miasma of hypocrisy and paranoia.

Already, prohibition is bringing American society closer to a total police state, with mandatory urine testing at our places of employment, police roadblocks on our highways, electronic surveillance of our public and private lives, and the maintenance of detailed secret police files on every citizen.

Thomas Jefferson (“life, liberty, and the pursuit of happiness”) and Patrick Henry (“give me liberty or give me death”) must be squirming and writhing in their graves as they look back on their progeny of two centuries.

I appeal to all who read these words: *The use and exchange of visionary vegetable products is not a crime!*

Demand an immediate end to all prohibition laws!

Demand that all prisoners of prohibition be freed under a general amnesty, and that reparations be paid for their forfeited property, lost livelihood, and disrupted lives!

Organize and act to stop this mad Juggernaut of misguided government called prohibition—before it succeeds in crushing out the flame of Liberty from the face of the Earth!

So must it be!

# Psychedelics, Technology, Psychedelics

by Bernard S. Aaronson and Humphrey Osmond

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Any culture may be regarded as a ramification of a particular technology applied to the particular set of local conditions within which that culture is situated. The term “technology,” as used here, refers to the entire set of devices, whether mechanical, chemical, or linguistic, by which adaptations of individuals to their environments are enhanced. Plows, clubs, radios, airplanes, fertilizers, drugs, breakfast cereals, grammars, and concepts are each implements and instances of technology, which influence and are influenced by one another. Some implements operate by directly altering the environment in response to the demands of the individual, as when we turn on an air conditioner on a hot day. Others operate by altering the individual to meet the demands of the environment, as when we “make the last one for the road coffee.” Still others may attempt to integrate the two, as when we read a book to gain knowledge that will help us in particular situations.

All systems of technology have certain common characteristics in terms of how they affect those who use them. They set up ways of looking at the world in terms of which new experiences can be encoded. One of the best illustrations of this is given in an old Jewish folk song in which the singing of a new cantor on the Sabbath is heard by a tailor in terms of how one sews a suit of clothes, by a cobbler in terms of making

shoes, and by a carpenter in terms of cutting wood. Systems of technology focus attention on certain kinds of relationships and particular ways of conceptualizing those relationships. It is probably no accident that the great Chinese book on time, the *I Ching*, with its emphasis on seasons and changes and on ways of adapting to these and on the right time for initiating and carrying through action should have arisen as a vegetable oracle, the product of a farming people.

Conceptualizations, once arrived at, interact to produce new conceptualizations, new technology, from which, once more, new concepts and new needs may emerge. Television, for instance, derives as a concept from motion pictures and radio and, even though it was introduced only a comparatively short time ago, has rapidly become a central part of homes at all levels of society in our culture. Watching television has tended to produce a more uniform culture through greater exposure to common stimuli, has reduced the amount of time available for free interaction by members of any particular household, and has resulted in the creation of such implements as “TV trays” and “TV dinners” to accommodate the need for more time around the television set. Automobiles have made possible the movement to the suburbs, the virtual end of public transportation in many parts of our country, and a resultant increased dependency on private means of transportation. In its turn, this has produced a more mobile population, a proliferation of roads, a tendency to think of distance in terms of units of time, the destruction of the countryside, and an increased need to deal with air pollution.

Any technological innovation in any area expands to fill all the analogous gaps to which it can be applied. The technology of clubs developed into the technology of axes and hoes, and, in modern America, into the technology of baseball. Any technological system has a degree of play that makes possible the development of new technologies, which may not be immediately useful, but can become functional or can be combined to be functional when the need arises. The technique for producing light shows has long been available but remained essentially unused until the advent of psychedelic drugs produced its impact on a generation accustomed to TV diffraction patterns.

The technology of drugs is one of the oldest technologies and



probably began when our ancestors browsed their way through the forests and found that, among the foods they sampled, some produced interesting changes in how they felt, how they perceived, and how they could accommodate themselves to the world. Substances that alter consciousness are found in use among probably all the peoples of the world (Taylor, 1963). In particular, substances containing alcohol and caffeine seem to be used nearly everywhere, and hemp and its derivatives also seem widely used.

Substances whose main effect is to stop hunger are classed as foods. Even though it is now customary to present an analysis of the chemical composition of many of the foods we eat on the sides of the containers in which they are packaged, their action tends to be studied in laboratories of nutrition rather than in those of pharmacology. The kinds of detailed study of effects on particular structures and organ systems that have historically characterized pharmacological study are rarely undertaken with foods.

Substances that increase conviviality or stimulate the individual are often treated as foods if they can be eaten, or as more like drugs (without usually naming them such) if they must be smoked. Alcohol, coffee, tea, and chocolate represent the edible class of these substances, as does cannabis and its derivatives in many Moslem and Eastern countries. Cannabis and tobacco probably represent the principal common substances smoked. The continuing agitation against the use of alcohol and cannabis by various groups in our culture suggests the anomalous position of these kinds of substances on the food-drug continuum. The fear and anxiety over the moral and physical degradation that might result from enslavement to coffee, tea, and chocolate when these were introduced into Europe are another case in point. It should also be noted that many tobacco smokers often have trouble conceptualizing tobacco as a drug, for the term “drug” has developed very specialized meanings.

Among the foods sampled by our ancestors, some sustained life, others destroyed it. Still others seemed to remove illness. Sometimes those foods that destroyed life could also sustain it and remove illness if administered in proper ways and in proper amounts. It is hard to say when the division of edibles into foods and poisons and into foods and drugs arose, for the divisions already existed at the beginning of re-

corded history. Legends of the witch woman and the wizard and their herbs, or of the apple whose scent drives away disease are very old. A technology of drug use is found in all cultures along with a technology of poisons, and the control of that technology is vested in individuals with priestly or semi-priestly functions, or in others with claims to special relationships with the supernatural. As the amount of knowledge around the use of the healing arts grew, the priesthood, which dealt in healing, gradually gave way to a more secularized group, with specialized training, called physicians. Another group claimed jurisdiction over the preparation of these substances and were called apothecaries or, more recently, pharmacists. These experts knew which drugs to prescribe and when. It was also apparent that these substances could sometimes be dangerous when improperly compounded or improperly used, so it was important to listen when they told you how to use the possibly dangerous substances in which they dealt. In addition, since they dealt in alleviating suffering, a “good guy” image was easy to come by. As a result, a drug in this context became something that was used on the advice of a physician, and that it was foolhardy to use otherwise.

While a tradition of using minor remedies for things like colds or warts existed, reasonable people left the control of drugs in the hands of the experts. Even patent medicines derived their fundamental cultural status from the implied approval of these groups, or had to go back to their precursors, the medicine men and shamans of primitive days. To this day, television advertisements for patent medicines that will cure headaches, sinus congestion, or “tired blood” are delivered by friendly, fatherly looking men in white coats. On the other hand, the development of modern research technology made possible an expansion of the number of substances recognized as specifics against particular ailments and increased the range of illnesses and conditions for which drugs could be used. In particular, the realization that food-deficiency diseases exist, and the development of vitamin pills to be used as a food supplement, created a dynamic tension between the restricted use of drugs and the use of pills as food. Subsequently, the modern development of mood-changing drugs such as tranquilizers, and their promiscuous prescription by physicians to such a point that some minor tranquilizers can now be purchased without a prescription, completed the breach. We became a pill-using culture, although the earlier caution about the use of drugs

remained as a nagging sense of guilt.

Alongside the medically controlled and related concept of drugs, a second conception exists of drugs as substances that produce depressing but exotic sleep states to which the user becomes easily addicted, to the exclusion of the claims and pleasures of ordinary life. In Homer's *Odyssey*, Ulysses and his crew visit the Land of the Lotus Eaters, whose inhabitants are addicted to a fruit that, when tasted, puts the user into a sleep in whose dreams all thoughts of home and country are forgotten. In our country, in our time, when somebody says he feels "drugged," he is generally referring to a state of depressed apathy. In contrast to this, we may often refer to a situation in which we have been gratified as one in which we have been "fed." A product that does not sell is referred to in business as "a drug on the market," but a new concept or a new perception may be "food for thought." It is commonplace to hear how opium, the prototype for this conception, destroyed the initiative and capacity for constructive activity of the people in many Eastern countries and kept them from the progress and well-being of the Protestant ethic. It is a fact, moreover, that China did fight a losing war to keep British enterprise from bringing in opium, because the rulers of China felt that the effects of opium addiction would enervate their population.

For us, drugs are often seen as substances used in strange and alien cultures whose customs are the material from which travelogues are made and to which the intrepid traveler may venture only at the risk of being debauched. The early writings on opium by Thomas De Quincey, and the accounts of hashish experiences by Theophile Gautier and Fitzhugh Ludlow stress the exotic nature of the experience. Even Coleridge's famous poem *Kubla Khan*, written from an opium dream, in which the legendary ruler builds a pleasure dome in Xanadu over a hidden sacred river where women mourn for demon lovers and Abyssinian maids play dulcimers, bears out this aura of the strange. Drugs are substances that not only render us unable or unwilling to function in ordinary life, but make available exotic and forbidden landscapes. In these landscapes, the images of nightmare from which we have fled since childhood, move and take shape.

This view of the dangerous nature of drugs is further buttressed by the modern concept of "the drug addict"—an individual so enslaved by his need to escape "reality," a euphemism for the disappointments

attendant on the need to survive, that he seeks these dangerous substances to the exclusion of the more conventional activities that keep society functioning. This immediately arouses the fear that if one person finds "illegitimate" states so attractive, others will follow because of their inherent superior pleasure-giving quality. The strictures by Louria (1966) on the hedonism of drug use emphasize this fear. Similar attitudes are expressed in the fear and condemnation of homosexuals by many perfectly adequate and well-adjusted heterosexuals, and in the horror felt by some parents when they find their children masturbating.

The drug addict is seen as becoming less controlled and more apt to express impulses that our society frowns upon, as his drug use continues. He is finally so taken over by his need, and so debauched, and so unable to make his own way, that he is forced to turn to crime to prolong a life that is now a threat to the survival of others. These negative images play an important role with respect to any substance labeled "drug" and not medically prescribed or available in a pharmacy. It is interesting to note that cough medicines containing codeine, an addicting drug, are available without prescription in many of our states, and that, at least until recently, paregoric, which contains a small quantity of opium, was freely available without prescription for use with infants. That these concepts represent an important aspect of the affective reaction to drug use is shown by the fact that campaigns against drug abuse in general, and the use of psychedelics in particular, have centered around appeals to these images.

Psychedelics are the newest addition to drug technology in our culture. While the use of many of these substances in their plant form is very old, their use in our culture is very recent, apart from minor experimentation by early scientists concerned with consciousness, such as William James, Weir Mitchell, and Havelock Ellis (DeRopp, 1957). Written descriptions of the use of hemp date from about 1250 B.C. *Datura* preparations are used in magic and witchcraft in many areas of the world. *Amanita muscaria*, the fly agaric mushroom, was not only probably used by the ancient Vikings when they went into battle, but, according to recent evidence, may have been the legendary soma of the founders of Hinduism (Schultes, 1969; Wasson, 1969). It is not possible to say how far back the use of peyote, ololiuqui, or of *Psilocybe mexicana* goes, for the records were destroyed by the Roman Catholic

missionaries to the conquered people of Mexico in their zeal for the welfare of the souls of their charges.

The central property of any of the substances labeled psychedelic is the enhancement of experience. In the anti-drug writings in the popular and semi-popular press, psychedelics have even been condemned as offering “instant experience.” They seem to step up the capacity of the organism to respond to fine gradations of stimulus input, to enhance response to stimulation at the upper and lower levels of perceptual responding, and to break down the barriers imposed by the different sensory avenues through which stimulation is received, in order to produce new perceptions, a greater frequency of illusions, and, more rarely, hallucinations. Before Osmond (1957b) coined the word “psychedelic,” they were more commonly referred to as psychotomimetics or hallucinogens to stress their capacity to mimic psychoses or induce hallucinations. In contrast, depressants, such as alcohol and the barbiturates, and narcotics, such as opium and morphine, reduce attention to stimulus input, although hypnagogic and dreamlike states are possible with all of these. Stimulants, such as the amphetamines and caffeine, may enhance endurance, improve mood, and increase alertness and work capacity, but they do not promote attention to the fine nuances of sensory experience as do the psychedelics.

The ability of the psychedelics to produce enhanced capacity for experiencing, and for interrelating the data of experience, is central in understanding both their significance and their popularity. Very few books that deal with psychedelics fail to include individual protocols of such experiences. Metzner (1968), Ebin (1961), and Watts (1962) have published entire books containing nothing but protocols of psychedelic experience. Huxley’s great book *The Doors of Perception* (1954), which probably marks the beginning of the modern psychedelic movement, is also such a protocol from his famous initial encounter with the Belle of Portugal rose to his final return to “that reassuring but profoundly unsatisfactory state known as ‘being in one’s right mind.’” Timothy Leary’s recent autobiographical account of psychedelia, *High Priest* (1968), is also presented in terms of psychedelic “trips.” In discussing the use of psychedelics in therapy for various emotional disorders, Hoffer and Osmond (1967) stress that LSD, psilocybin, and mescaline may all be equally effective. “It is the experience, not the compound

which induces it, which is responsible.”

The stress on enhanced experiencing as the fundamental characteristic of these substances leads, in the literature, to a stress on the importance of the setting in which the drug is taken. In order for the enhanced capacity for experience created by these substances to show itself, an adequate range of stimuli must first be available to be experienced. Administration of psychedelics under conditions of sensory deprivation seems to abolish most of the usual effects attributed to them (Pollard, Uhr, and Stern, 1965). Hoffer and Osmond (1967) stress the importance of providing adequate environmental support to produce the kinds of experience required to produce change in personality. Alpert and Cohen (1966) also stress the need for adequate settings to provide psychedelic experiences.

On the other hand, as the stimulus situations presented to the drug taker increase in complexity, the variability of possible responses to those stimuli increases, especially when there is perceptual heightening. For this reason, along with the emphasis on setting, a companion emphasis on set—the attitudes, motivations, preconceptions, and intentions that individuals bring to their experiences—has arisen. Mogar (1965, 1965) has suggested that contradictory results in different experiments on the effects of psychedelics on different functions can be accounted for by considering the differences in set and setting. Leary, Litwin, and Metzner (1963) have suggested that the total effect of an exposure to psilocybin could be accounted for entirely in terms of set and setting. Krippner (1965) has pointed out that the psychotomimetic reactions of the early studies with LSD occurred within the context of a laboratory in which the individual taking the drug was surrounded by white-coated physicians who were looking for evidence that an analogous situation to schizophrenia was being produced. Hyde (1960) showed that when psychedelics were administered to a variety of normal subject groups under conditions in which they were confronted with impersonal, hostile, and investigative attitudes on the part of others, the subjects responded with devaluative distortions and hostility. Flexibility, familiarity, and the presence of others with a common culture ameliorated the psychotomimetic aspects of the reaction, while rigidity, unfamiliarity, non-acceptance, and absence of others with a common culture exacerbated them.

While few would seek enhanced experience if that experience



were negative, the ability to enhance the capacity for experience is an important reason for the increased popularity of psychedelics. People tend to do what they are good at. Well-coordinated, well-muscled individuals are apt to be involved in athletics; those with good number ability are apt to enjoy working with numbers. One of the best predictive devices for vocational success is the Strong Vocational Interest Inventory, which provides scores based on the similarity of an individual's interest patterns to those of individuals who are successful in their chosen fields. Virtually everyone has the capacity to react, judge, and seek out experience. People will often go on long and arduous journeys just to see things, or will buy recording equipment, radios, or television just to provide themselves with stimulation. They will register for difficult courses of instruction with no demonstrable practical consequences for themselves, in order to enhance their experience. This is not unique to man, for animals show a similar pattern of experience seeking (Welker, 1961). In human societies, the theater, the church, sports spectacles, the pomp and ceremony of parades, the rides, color, and glitter of carnivals, all are institutions created to meet the need for enhanced experience. We are built to process stimuli, and an important part of living is seeking out stimuli to be processed. The popularity of psychedelics is not only a function of this general characteristic of stimulus seeking, but it also suggests the relative infrequency of bad experiences resulting from their use, unless we wish to posit masochism as an equally fundamental characteristic of biological adjustment.

Because psychedelics focus attention on individual experience, some important social consequences arise from their use. Individual experience is on the one hand unique to the experienced and on the other characterized by great transpersonal commonality as one goes deeper into the self (Aaronson, 1968). In spite of the scientific validity of the behaviorist critique that private experience is not available for scientific observation, for each of us, as individuals, our own experiences have a veridicality shared by few other things in this world. We not only seek experience, we respond in terms of our experiences, and accord a special hearing to those who can "speak from experience." Immediate experience is of greater consequence to the individual experiencing it than any promise of future good or ill made by a personal or impersonal authority figure. Any parent who has had to take a child to face a shot adminis-

tered to him by his kindly pediatrician can testify to this. Any smoker who lights up contentedly as he reads the warning on his cigarette pack also shows its validity.

When individual experience is emphasized, the generalized verbal formulas for societal control based on hoary and long-unquestioned precepts become open to question as they are filtered through the individual consciousness. Various institutions maintain their authority by means of symbols and concepts that evoke traditional emotional reactions, and the more-rational verbal responses function as unconscious rationalizations of these reactions. That is, many logical arguments turn out to be simply elaborations of illogical emotional biases. These traditional emotional biases are inculcated from the earliest age at home, in the schools, and in the propaganda organizations for children, such as the Boy Scouts, the Girl Scouts, the YMCA, and other groups. Similar institutions exist in Communist and Fascist societies, except that there the conditioning tends to be more frenetic and compulsive than in our own. The attention to the ways in which these symbols can affect us makes plain the inherent illogic of conventional wisdom. Once the question of "Why, indeed, should I respond in this way?" has been posed, many of the structures of society will tumble if answers cannot be found rooted in the existential being of the questioner.

Many of the consequences of this kind of questioning can be seen not only among the hippies and in Leary's concept of society as a collection of television stage props (1968), but in the kinds of questions posed by those of our young people who have not obviously taken on the extreme styles of life represented either by the hippies or by Leary. The use of marijuana is sufficiently widespread among our young adult groups that attitudes developing from attention to one's own consciousness have pervaded their style of approach to the world. Before the question of "What career shall I choose?" can be answered, the question of "Why should I choose a career?" must be settled. Before one can agree to fight for flag and country, the existential meaning of flag, country, death, killing, freedom, and a host of other concepts must be considered. The source of power is not seen as being conferred from on high, but as arising from the behavior toward the power wielder of those over whom power is exercised. This attitude has tremendous implications with regard to the kinds of behavior that will be displayed toward

the traditional holders of power and the traditional methods of displaying power.

The development of similar emphases on personal revelation and personal consciousness at various points in the history of Christendom led to the formation of many of our existing Protestant denominations and the replacement of the old Catholic concept of an ordained priesthood with a new concept of the priesthood of all believers. The so-called “generation gap” is a mirage that results not from the traditional need of the young to make their way in a world of already established people nor from any traditional traits of impatience or idealism, although all these may be factors, but from differing amounts of attention to the importance of individual experience. Because of the greater willingness of young people to try new things, the consciousness-changing chemicals had their greatest effect along peer-group lines.

Because of the fact that each individual consciousness is located in a body, increased awareness of the body and of our functions as biological organisms seems to occur in the psychedelic-user population. This is not the kind of stress on the body traditionally associated with weight lifting or the overdevelopment of body parts that give a good male or female image, but desire for a well-functioning body that is pleasant to experience. This has led to an interest in hatha yoga and in tai chi, the Indian and Chinese systems of exercise whose aim is not muscular development, but peace, coordination, and good bodily functioning. All bodily functions and bodily needs are more apt to be accepted and, even more important, respected. The ancient verbal taboos limiting sexual behavior have been weakened by the non-verbal nature of psychedelic experience. Excretory functions are accepted without embarrassment. Preferences develop for simple foods with more concern about how these may affect the body, although there is some tendency for this concern to turn to cultishness. Clothes are no longer used to hide the body, but to emphasize the body as the source of experience. The greater openness with regard to the physical self has been accompanied by relaxation of the taboo against touching other people and being touched by them, an event of overriding social consequence in changing the character, intensity, scope, and available possibilities in any interpersonal relationship.

Beyond the perception of the body itself, the enhanced sensory

experience has called attention to the pleasures and insights that can be obtained directly from sensory experience. Light shows and modern rock music reflect some of the visual and auditory experiences produced by psychedelics. Aldous Huxley (1956) has pointed out the luminous intensity of colors found in “the antipodes of the mind,” and this is mimicked by Day-Glo paints and the eerie glow of colors under black light. The greater sensitivity to color reflections, color shadows, and afterimages, especially as they appear reflected on glossy surfaces like skin, has led to the modern fashion of body painting. Along with the perception of oneself as a biological organism, with its consequent emphasis on the simple and natural, there has been an increased awareness of the complexity and beauty of natural phenomena. This has been further elaborated by the fact that, with many of the psychedelics, the retinal structure of the eye itself enters into the perception, as Kluver (1966) has pointed out. This has complicated the drive for simplicity with a preference for the baroque. The resulting dynamic tension appears in all forms of psychedelic decoration, music, literature, and art. Masters and Houston (1968) have shown this well in their recently published book on psychedelic art, which runs the gamut from simple meditative expressions to welters of clashing stimulation designed to make the viewer leave his senses through overstimulation of his senses.

Going deeply into one’s own experience leads to insights beyond those experienced when the focus of attention is on what is experienced rather than the mode of experience itself. The appearance of reality is no longer taken at face value, but is seen as an interaction with the perceptual apparatus of the perceiver. This means that the usual existential primacy given the world around us, probably because we are built to process information coming to us from the outside, gives way to an equality of perceives and perceived, so that the perception itself becomes the primary datum in a conscious sense, as it has always been without our realization. This is, indeed, one of the goals of many meditative systems, and meditation as such has become a popular activity among the psychedelic subgroup and those influenced by them. Indeed, movement within the self away from its more-surface manifestations inevitably invokes religious imagery (Masters and Houston, 1966; Aaronson, 1968), although images invoking religious feelings may be possible at all levels of consciousness. The sense that depth is expanded, common in

psychedelic experiences, is like the environmental conditions most commonly associated with mystical experience, and mystical experiences can be produced by experimentally providing experiences of enhanced depth (Aaronson, 1967).

Movement within reaches the level of archetype and myth and may transcend these to a point of ultimate mystical union. The archetypes may be an elaboration of current material featured in the concerns of the popular press, as Barron (1967) has pointed out. They may derive from early impressions and concerns fed by other technologies in our culture. Tom Wolfe (1968), for instance, has pointed out the prevalence of imagery from the comic books dear to children in the late thirties and early forties in the group centering around Ken Kesey. They may derive from fundamental perceptions of our own structures and modes of functioning. Barron (1967) has noted, "an experience of Christ, i.e. of Christ free from the institutional embodiment known as Christianity, is common to many psychedelic "trips." Christ on the cross may then be understood simply as "consciousness impaled on the human form, mind hung to die on body to expiate our voluntary participation in the world's heavy materialism." This manner of thinking and perceiving, the concentration on archetype, the sense of an indwelling, immanent God, and the interest in meditation have correspondingly created an interest in those forms of religion that stress these notions: Hinduism, and Tibetan and Zen Buddhism. Psychedelic experience is fundamentally religious, as any experience of life taken as an experience of life must be. Braden (1967) has pointed out that the fundamental thrust of psychedelic experience is religious and its fundamental challenge is to the forms of organized religion. It is one of the forces contributing to the ferment in contemporary Christianity that is presently leading one of the oldest and most tradition-bound of Christian churches to reevaluate its forms, its structure, and many of the engrafted beliefs of its development.

The development of any new major innovation in technology affects profoundly the life and structure of the society in which it occurs. The development of psychedelics is such a major innovation, which promises revolutionary changes and is, in fact, already producing them. Psychedelics may have a potential impact on society equivalent to that of the machine, which in setting off the Industrial Revolution, created much of what we now consider our "natural" and "traditional" styles of life

and forms of organizing society. At the time of the beginning of the Industrial Revolution, those dispossessed by the new forms blamed the machines and tried to wreck them in the Luddite rebellion. Our modern Luddites are not the dispossessed, but those who exist at the very center of the power structure. The alteration of values, the questioning of rules by those who have had psychedelic experiences, create much consternation, often by their very own children, among individuals who have made their way by those rules and under the value system of the existing society. In addition, the negative implications of the concept "drug," noted earlier in this discussion, are not without their effects.

Confronted by danger, each carries out his social function. The mass media simultaneously point at the wonders of psychedelic experience and view them with alarm. Psychologists, psychiatrists, and sociologists, whose business it is to find abnormality in deviance, find abnormality in deviance. Government agencies introduce regulations, lawmakers make laws, and policemen police. The upshot of all this activity is that it is now almost impossible to carry out legitimate research with psychedelics. A large user population has developed that uses bootleg drugs, sometimes containing dangerous impurities, and almost certainly producing revenue for organized crime. Drugs are now used by individuals who, under a system of controlled access to them, would probably not have been exposed to them and run the risk of injuring themselves. It is difficult to set up safeguards for the proper use of the major psychedelics when this use is illegal. One segment of our population exists under conditions reminiscent of prohibition, while the other looks on with alarm. A crisis in confidence has been created that cuts across generational lines. A great many people who normally would be law-abiding are placed in the position of outlaws, with marked implications for their further relationships to society and its institutions.

It is beyond the scope of this paper to do any more than outline briefly some of the implications of psychedelic technology and some of its associated problems. The rest of this book is devoted to filling in the picture in more detail. At the present time, the repressive attitudes toward this new technology are so strong that its effects can only show themselves in strange and aborted forms. Perhaps the situation will be eased to permit more open and controlled development of what is now clandestine and uncontrolled. Hopefully.

# Programming and Metaprogramming in the Human Biocomputer

by John Lilly

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All human beings, all persons who reach adulthood in the world today are programmed biocomputers. No one can escape one's own nature as a programmable entity. Literally, each of us may be his programs, nothing more, nothing less.

Despite the great varieties of programs available, most of us have a limited set of programs. Some of these are built in. The structure of our nervous system reflects its origins in simpler forms of organisms, from sessile protozoans, sponges, and corals through sea worms, reptiles and protomammals to primates to early anthropoids to humanoids to man. In the simpler basic forms the programs were mostly built in: from genetic codes to fully formed organisms adultly reproducing, the patterns of function of action-reaction were determined by necessities of survival, of adaptation to slow environmental changes, of passing on the codes to descendants.

As the size and complexity of the nervous system and its bodily carrier increased, there appeared new levels of programmability, not tied to immediate survival and eventual reproduction. The built-in programs survived as a basic underlying context for the new levels, excitable and

inhibitable by the overlying control systems. Eventually the cerebral cortex appeared as an expanding new high-level computer controlling the structurally lower levels of the nervous system, the lower built-in programs. For the first time learning, with its faster adaptation to a rapidly changing environment, began to appear. Further, as this new cortex expanded over several millions of years, a critical size of cortex was reached. At this new level of structure, a new capability emerged: learning to learn.

When one learns to learn, one is making models, using symbols, analogizing, creating metaphors, in short, inventing and using language, mathematics, art, politics, business, etc. And at the critical brain (cortex) size, languages and its consequences appear.

To avoid the necessity of repeating "learning to learn," "symbols," "metaphors," "models" each time, I symbolize the underlying idea in those operations as "metaprogramming." Metaprogramming appears at the critical cortical size: the cerebral computer must have a large enough number of interconnected circuits of sufficient quality for the operations of metaprogramming to exist in this biocomputer.

Essentially, metaprogramming is an operation in which a central control system controls hundreds of thousands of programs that simultaneously operate in parallel. In 1974 this operation is not yet performed within man-made computers; metaprogramming is done outside the big solid-state computers by the human programmers or, more properly, the human metaprogrammers. All choices and assignments of what the solid-state computers do, how they operate, what goes into them, are still human biocomputer choices. Eventually we may construct a metaprogramming computer and turn these choices over to it.

When I said we may be our programs, nothing more, nothing less, I meant that the basic substrate, the substrate under all else, of our metaprograms is our system of programs. All we are as humans is what is built in and what has been acquired—and what we make of both of these. So we are one more result of the program substrate—the self-metaprogrammer.

As out of several hundreds of thousands of the substrate programs comes an adaptable changing set of thousands of metaprograms, so out of the metaprograms as substrate comes something else—the controller, the steersman, the programmer in the biocomputer, the selfmeta-pro-



grammer. In a well-organized biocomputer, there is at least one such critical control metaprogram labeled “I” for acting on other metaprograms and labeled “me” when acted upon by other metaprograms. I say “at least one” advisedly. Most of us have several controllers, selves, self-metaprograms which divide control among them in sequences of control either parallel in time or in series. One approach to *self development* is the centralizing of control of one’s biocomputer in his self-metaprogrammer, making the others into conscious executives subordinate to the single administrator the single superconscious self-metaprogrammer. With appropriate methods, this centralizing of control, the elementary unification operation, is a realizable state for many, if not all, biocomputers.

Beyond and above in the control hierarchy, the position of this single administrative self-metaprogrammer and his staff, there may be other controls and controllers which for convenience I call “supraself-metaprograms.” These are many or one, depending on current states of consciousness in the single self-metaprogrammer. These may be personified “as if” entities, treated “as if” a network for information transfer, or “realized” as if self traveling in the universe to strange lands or dimensions or spaces. If one performs a further unification operation on these supraself metaprograms, one may arrive at a concept labeled “God,” the “Creator,” the “Star Maker,” or whatever. At times we are tempted to pull together apparently independent supraself sources “as if” one. I am not sure we are quite ready to perform this supraself-unification operation with any expectation that the result will correspond fully to an objective reality.

Certain states of consciousness result from and cause operation of this apparent unification phenomenon. We are still general purpose computers who can program any conceivable model of the universe inside our own structure, reduce the single self-metaprogrammer to a micro size, and program him to travel through his own model “as if” real (level 6, satori +6).<sup>1</sup> This ability is useful when one steps outside it and sees it for what it is—an immensely satisfying realization of the programmatic power of one’s own biocomputer. Overvaluing or negating such experiences is not a necessary operation. Realizing that one has this ability is an important addition to one’s self-metaprogrammatic list of probables.

Once one has control over modeling the universe inside one’s self and is able to vary the parameters satisfactorily, one’s self may reflect this ability by changing appropriately to match the new property.

The quality of one’s model of the universe is measured by how well it matches the real universe. There is no guarantee that one’s current model does match the reality, no matter how certain one feels not only that there is a match but that it is a match of high quality. Feelings of awe, reverence, sacredness and certainty are also adaptable metaprograms, attachable to any model, not just the one best fitting the “reality.”

Modern science knows this: we know that merely because a culture generated a cosmology of a certain kind and worshipped it, there was no guarantee of goodness of fit with the real universe. In science we now proceed to test, insofar as they are testable, our models of the universe rather than to worship them. Feelings such as awe and reverence are recognized as biocomputer energy sources rather than as determinants of truth, i.e., of the trueness of fit of models versus realities. A pervasive feeling of certainty is recognized as a property of a stab of consciousness, a special space, which may be indicative or suggestive but is no longer considered as a final judgment of a true fitting. Even as one can travel inside one’s models inside one’s head, so can one travel *outside* or be *the outside* of one’s model of the universe, still inside one’s head (level +3, satori +3).<sup>2</sup> In this metaprogram it is as if one joins the creators, unites with God, etc. Here one can so attenuate the self that it may disappear.

One can conceive of other supraself-metaprograms farther out than these, such as those given in Olaf Stapledon’s *Star Maker*.<sup>3</sup> Here the self joins other selves touring the reaches of past and future time and of space everywhere. The planet-wide consciousness joins into solar system consciousness into galaxy-wide consciousness. Intergalactic sharing of consciousness fused into the mind of the universe finally faces its creator, the Star Maker. The universe’s mind realizes that its creator knows its imperfections and will tear it down to start over, to create a more nearly perfect universe.

Uses such as the above of our own biocomputer can teach us profound truths about our self, our capabilities. The resulting states of being, of consciousness, teach us the basic truth about our own equipment as

follows:

In the province of the mind, what one believes to be true either is true or becomes true within certain limits to be found experientially and experimentally. These limits are further beliefs to be transcended. In the province of mind, there are no limits.<sup>4</sup>

*The province of the mind is the region of one's models, of the alone self, of memory, of the metaprograms.* What of the region which includes our body, others' bodies? Here there are definite limits.

In the network of bodies—our own connected with others' for bodily survival-procreation-creation—there is another kind of information:

In the province of connected minds, what the network believes to be true either is true or becomes true within certain limits to be found experientially and experimentally. These limits are further beliefs to be transcended. In the province of the network's mind, there are no limits.<sup>5</sup>

But once again the bodies of the network housing the minds, the ground on which they rest, the planet's surface, impose definite limits. These limits are to be found experientially and experimentally, agreed upon by specially trained minds, and communicated to the network. The results are called "consensus science."

Thus, so far we have information without limits in one's mind and with agreed-upon limits (possibly unnecessary) in a network of minds. We also have information within definite limits (to be found) in one body and in a network of bodies on a planet.

With this formulation our scientific problem can be stated very succinctly as follows:

Given a single body and a single mind physically isolated and confined in a completely physically controlled environment in true solitude, with our present sciences can we satisfactorily account for all inputs and all outputs to and from this mind-biocomputer—i.e., can we truly isolate and confine them? Given the properties of the software-mind of this biocomputer outlined above, is it probable that we can find, discover, or invent inputs-outputs not yet in our consensus science? Does this center of consciousness receive-transmit information by at present unknown modes of communication? Does this center of consciousness stay in the isolated, confined biocomputer?

<sup>1</sup> Lilly, John C., *The Center of the Cyclone*.

<sup>2</sup> Ibid.

<sup>3</sup> Stapledon, Olaf, *Star Maker*, Middlellex, Eng.: Penguin Books Ltd., 1972.

<sup>4</sup> Lilly, John C., *The Center of the Cyclone*.

<sup>5</sup> Ibid.